104564-MEC-156CD-E-2012
Mechanical Engineer

Holds a B. Sc. in Mechanical Power Engineering and has over 7 years hands-on experience working in construction and design.

PERSONAL DATA

Nationality	:	Egyptian
Birth Date	:	18/09/1990
Gender	:	Male
Marital Status	:	Married
Residence	:	Future City, Cairo

EDUCATION

: B. Sc. in Mechanical Power Engineering, Mansoura University, 2012

LANGUAGES

Arabic	:	Native Language
English	:	Very Good

COMPUTER SKILLS

: Windows, MS Office (Word, Excel, Power Point), Internet

TRAINING COURSES AND CERTIFICATIONS

: TURBOMACHINERY (Sep. 2016):
- Basic concepts of pumps including impeller, mechanical seal, bearing.
- Basic concepts of steam turbines, gas turbines and compressors.
- Basic concepts of bearing, sealing and coupling.
- Basic concepts of shaft alignment.
- Basic types and construction of heat exchangers.
- Basic concepts of piping, flanges, gaskets and valves.

: ASPEN HYSYS (Sep. 2015):
- Simulate and analyze process plants in order to optimize existing plants and design.
- Develop heat and material balances.
- Design and rate process equipment such as pumps, turbines, compressors and valves.

: AIRCRAFT TURBO FAN ENGINE (Sep. 2015):
- Basic concepts of turbofan engine and operation principles.
- Principles of turbo fan engine systems such as air, fuel, lubrication and cooling systems.

- Study some engine troubleshooting such as compressor surge and engine overheat.

: Korean Center for Automotive Training (Jul./Aug. 2011):
- Technical training on the basics of Petrol and diesel engine including assembly and disassembly of them.
- Technical training on all engines systems such as fuel, cooling, lubricating, etc. and their main troubleshooting.
- Technical training on automotive manual transmission.

: Egypt Air (Aug./Sep. 2010):
- Training on many of turbo fan engines such as (V2500, CFM56).
- Attend the disassembly of V2500 turbofan engines and check bearing condition.
- Principles of turbo fan engine systems such as air, fuel, lubrication and cooling systems.

: UNITED GAS DERIVATIVE COMPANY (UGDC) (Sep. 2011):
- Training on the principles of rotary machines such as gas turbines, pumps and compressors.
- Training on the principles of gas processing.

: Training on the principles of many process equipment such as pumps, gas turbines, compressors and diesel engines, Suez Oil Co. (SUCO) (Jul. 2010).

CHRONOLOGICAL EXPERIENCE RECORD

Dates : From Nov. 2018 till now
Employer : MISR COMPANY FOR MECHANICAL AND ELECTRICAL PROJECTS
Project : West Cairo 650MW Supercritical Power Plant
Job title : Mechanical Engineer
Job Description :
- Lead a mechanical team to install 650MW DOOSAN steam turbine (DST-S20) and generator (DGen-W) according to the planned schedule.
- Install and align all turbine main parts including turbine base plates, HIP pedestal, HIP module, LP outer casing, LP inner casing, LP diaphrams, LP rotor, bearing and cross over pipe.
- Install and align generator main parts including base plates, stator frame, H2 coolers, high voltage bushings, end shield, rotor insertion, bearing, H2 sealing and exciter.
- Follow turbine, generator installation manuals and mechanical drawings using mechanical tools.
- Install and align turbine main steam stop control valves and combined reheat valve.
- Perform coupling alignment for turbine generator turboset and multiple pumps.
- Support commissioning team for lube oil flushing and steam blowout process.

Dates : From Nov. 2016 till Nov. 2018
Employer : ORASCOM CONSTRUCTION INDUSTRIES
Project : EL-BURULLUS 4800MW COMBINED CYCLE POWER PLANT
Job title : Mechanical Engineer
Job Description :
- Lead subcontractors to install SIEMENS gas turbines (SGT5-8000H), steam turbine (SST5-5000), generators (SGEN5-2000H) and their

auxiliary skids.
- Install and align gas turbine main parts including compressor support, turbine support, turbine skid, burners, intermediate shaft and exhaust diffuser.
- Install and align generator main parts including base plates, generator skid, high voltage bushings, exciter and bearing.
- Install auxiliary skids such as, gas fuel skid, gas metering skid, lube oil skid, fuel oil pump skid, hydraulic skid, seal oil skid and H2 skid.
- Install and align all turbine main parts including pedestals, HIP module, bearing, LP outer casing, LP inner casing, LP rotor and cross over pipe.
- Perform coupling alignment for turbine generator turboset.
- Install steam turbine insulation including HIP module, LP turbine and cross over pipe.
- Support commissioning team for lube oil flushing process and steam blowout process.
- Follow the punch list and make hand over with the owner.

Dates : From May 2016 till Nov. 2016
Employer : EL MASRIA CONSTRUCTION CONTRACT
Project : BENI SUEF 4800MW COMBINED CYCLE POWER PLANT
Job title : Mechanical Engineer
Job Description :
- Lead a mechanical team to install SIEMENS gas turbines (SGT5-8000H), generators (SGEN5-2000H) and their auxiliary skids.
- Install and align gas turbine main parts including compressor support, turbine support, turbine skid, intermediate shaft and exhaust diffuser.
- Install and align generator main parts including base plates, generator skid, high voltage bushings, exciter and bearing.
- Perform coupling alignment for turbine generator turboset.

Dates : From May 2014 till May 2016
Employer : Tripple P Engineering Solutions, Maadi – Cairo
Projects :
- APSCO NEW GREASE PLANT
- SHELL 6th OF OCTOBER LOBP MASTER PLAN 2015
- CO-OP (DEPOT MOSTOROD) DEVELOPMENT
- HELICOPTERS PROJECT JET FUEL STORAGE FACILITY 4

Job title : Mechanical Engineer
Job Description :
- Design, review and develop P&ID drawings, piping systems and pipe supports for many process plants according to ASME B31.3.
- Process plants 3D modeling Including plant layout, equipment modeling, piping routing, steel structure modeling, arrange piping specs to generate GA, isometric drawings and MTO using AutoCAD plant 3D.
- Design and sizing piping network using applied flow technology (AFT).
- Design steam system as a process utility system (Steam and condensate system) Including all calculations of heat loads and hydraulic calculations.
- Design and rating of some process equipment such as heat exchangers, steam coil heater, pumps and valves.
- Review and follow fabrication of fixed roof atmospheric storage tanks according to drawings.
- Review and check pumps data sheets required for many projects.

- Follow up construction execution for many projects and modify drawings according to site situation.

Dates : From Sep. 2012 till May 2014
Employer : Engineering Company for mold design, Mansoura
Job title : Mold Design Engineer
Job Description : Design melamine and plastic molds using CATIA v5.

Engineering Software Skills:

- CATIA v5:
  - Design mechanical parts using PART DESIGN, SURFACE DESIGN, HEALING ASSISTANT, SKETCH TRACER AND FREE STYLE.
  - Assemble mechanical parts using ASSEMBLY DESIGN.
  - Simulate mechanical mechanisms by using DMU KINEMATICS.
  - Produce mechanical drawings using DRAFTING.
  - Design molds using CORE AND CAVITY.
- AutoCAD Plant 3D:
  - Modeling 3D process plants including piping systems and pipe supports.
  - Modeling 3D of mechanical equipment and Steel structure.
  - Insert piping specs in plant using AUTOCAD SPEC EDITOR.
  - Generate PFD and P&ID drawings using AUTOCAD P&ID.
  - Generate piping isometric drawings (ISO).
  - Generate plant and piping general arrangement drawings (GA).
  - Generate piping and steel structure material take off (MTO).
- HTRI:
  - Design & rating shell and tube heat exchangers according to TEMA standard.
  - Develop initial mechanical drawings of heat exchangers.
- AFT (APPLIED FLOW TECHNOLOGY):
  - Develop high quality fluid flow analysis, calculate pressure drop and flow distribution in liquid and low velocity gas piping using AFT FATHOM.
  - Model, analyze and simulate pipes, valves and pumps systems in order to evaluate the performance of designs and assure all design requirements are met.
- NAVIS WORKS: Visualize and review the designed industrial projects to minimize potential problems before construction begins, helping to reduce expensive delays and rework.
- ASPEN HYSYS:
  - Simulate steady state different kinds of processes specially oil & gas.
  - Sizing and rating of various process equipment such as pumps, compressors, tanks, heat exchangers and valves.
  - Evaluate process performance at different conditions.

Field of experience :

- Experience in turbines erection since April 2016.
- Experience in the erection of DOOSAN 650MW steam turbine (DST-S20).
- Experience in the erection of DOOSAN 650MW generator (DGen-W).

- Experience in the erection of SIEMENS 400MW gas turbine SGT5-8000H.
- Experience in the erection of SIEMENS 400MW steam turbine SST5-5000.
- Experience in the erection of SIEMENS 400MW generator SGEN5-2000H.
- A very good knowledge of the turbines and generators mechanical construction drawings.
- Experience with the turbines mechanical measuring tools.
- Experience with turbine generator alignment.
- Experience in insulation installation for both gas and steam turbines.
- Execute flushing process of lube oil piping systems for both gas and steam turbines.
- Support commissioning team from starting the turbines and generators operation until steady operation.
- Follow the punch list and make hand over with the owner.
- Experience in 2D & 3D mechanical drawings design using CATIA V5.
- 2 years experience in process plants design including front end engineering design (FEED) and detailed engineering design.
- Experience with design, develop and review process P&ID and PFD.
- Conversant with the process simulation and design software (ASPEN HYSYS V8.8).
- Sizing & Rating of Process Equipment (Pumps, Tanks, Heat exchangers, Air coolers, Compressors, Control Valves, etc.).
- Perform piping hydraulic calculations (pump sizing, pressure drop and piping sizing) using AFT software (APPLIED FLOW TECHNOLOGY).
- Design & rating shell and tube heat exchangers according to TEMA standard using HTRI software.
- Design & rating air coolers using HTRI software.
- A small experience with the atmospheric fixed roof storage tanks design according to API 650 standard using AMETANK software.
- Design process plants layout using AUTOCAD PLANT 3D software.
- Modeling and routing piping according to P&ID and piping standards using AUTOCAD PLANT 3D software.
- Generate Piping general arrangement (GA) and isometric drawings using AUTOCAD PLANT 3D software.